

WHAT IS CLAIMED IS:

1. Process for production of a flat strip, wherein a support fiber web comprised of a plurality of parallel oriented reinforcing fibers with transverse fibers interwoven is embedded in a plastic binder matrix, thereby characterized, that a film (40', 40'') of thermoplastic material is pressed against at least one broad surface of the support fiber web (38), that the thermoplastic material of the thermoplastic film (40', 40'') is caused to melt under the influence of heat, that the support fiber web (38) is impregnated with the melt of the thermoplastic material under the influence of pressure and that subsequently under maintenance of the pressure force the thermoplastic material is cooled with formation of hardened binder matrix.
2. Process according to Claim 1, thereby characterized, that the support fiber web (38) and the at least one thermoplastic film (40', 40'') are pressed, heated and cooled in a pass-through process.
3. Process according to Claim 1 or 2, thereby characterized, that the support fiber web (38) and the at least one thermoplastic film (40', 40'') are drawn from supply rollers (32, 34', 34'') and are pressed, heated and cooled along a pass-through segment (28).
4. Process according to one of Claims 1 through 3, thereby characterized, that the support fiber web (38) is conveyed to the pass-through segment (28) in the longitudinal direction of the reinforcing fibers.
5. Process according to one of Claims 1 through 4, thereby characterized, that a protective film (42', 42'') is

supplementally provided on the side of the thermoplastic film (40', 40'') facing away from the support fiber web, that these are supplied to the support fiber web, and that during the heating and cooling process under the influence of pressure force the protective film is surface-bonded to the flat strip, preferably releasably.

6. Process according to Claim 5, thereby characterized, that the protective film (42', 42'') is drawn from a supply roll (36', 36'') and conveyed to the common pass through segment (28).

7. Process according to one of Claims 1 through 6, thereby characterized, that flat strip (30) is wound upon at least one material roll (48) subsequent to the pass-through segment (28).

8. Process according to one of Claims 1 through 7, thereby characterized, that subsequent to the pass through segment (28) the flat strip (30) is subdivided into strips aligned parallel to the pass-through direction.

9. Process according to one of Claims 1 through 8, thereby characterized, that the flat strip (30) subsequent to the pass through segment (28) is stored with formation of flat strip lamellas or stacks.

10. Process according to one of Claims 1 through 9, thereby characterized, that the support fiber web (38), the at least one thermoplastic film (40', 40'') and the optional protective film (42', 42'') are pressed, heated and cooled between two rotating press bands (24) of a double band press (20).

100-200-300-400-500-600-700-800-900

11. Process for production of a flat strip, wherein a support fiber web comprised of a plurality of parallel oriented reinforcing fibers with interwoven transverse fibers is embedded in a binder matrix of plastic, thereby characterized, that the support fiber web (38) is permeated with a preferably aqueous suspension (52) of finely divided thermoplastic plastic particles, that the thus permeated support fiber web is dried under the influence of heat, that the thermoplastic material remaining upon the dried support fiber web is caused to melt under the influence of heat and subsequently cooled again with formation of solidified binder matrix.
12. Process according to Claim 11, thereby characterized, that a support fiber web (38) drawn from a roll is passed through a suspension mixture (52).
13. Process according to Claim 11 or 12, thereby characterized, that the flat strip (30) is pressed or calendered prior to, during or subsequent to the hardening of the binder matrix.
14. Process according to one of Claims 1 through 13, thereby characterized, that multiple individual flat strips are surface bonded with each other under the influence of pressure and heat for increasing the wall thickness.
15. Flat strip, comprised of a plurality of parallel oriented reinforcing fibers which are interwoven with transverse fibers for forming a support fiber web (38) and which together with the transverse fibers are embedded in a binder matrix of thermoplastic material, wherein the binder matrix permeates the free interstitial spaces of the support fiber web (38).

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16. Flat strip lamella according to Claim 15, thereby characterized, that the support fiber web embedded in the binder matrix is provided on at least one broad surface with a preferably releaseable protective film.
17. Flat strip lamella according to Claim 15 or 16, thereby characterized, that a thermoplastic material is selected from the group consisting of polyolefins, vinyl polymers, polyamides, polyacetals, polycarbonates, polyurethanes and ionomers.
18. Flat strip lamella according to one of Claims 15 through 17, thereby characterized, that the reinforcing fibers consist of or include carbon fibers.
19. Flat strip lamella according to one of Claims 15 through 18, thereby characterized, that the reinforcing fibers comprise or contain aramid fibers, glass fibers or polypropylene fibers.
20. Flat strip lamella according to one of Claims 16 through 19, thereby characterized, that the protective film is comprised of a duroplastic, such as polyester, or of an elastomer, such as silicon-rubber or of silicon treated paper.
21. Use of the process according to one of Claims 1 through 14, for manufacture of flat strip lamella for reinforcing of load bearing or load transmitting construction components preferably of cement, mortar, plastic or wood.

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